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TAMIL MIGRANT WOMEN'S PERCEPTION OF A TRANSCULTURAL DIETETICS TOOL FOR THE COUNSELING OF GESTATIONAL DIABETES PATIENTS

PERCEÇÃO DAS MULHERES MIGRANTES TÂMIL DE UMA FERRAMENTA ALIMENTAR TRANSCULTURAL PARA ACONSELHAMENTO NA DIABETES GESTACIONAL

A.O.
ARTIGO ORIGINAL

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ABSTRACT

INTRODUCTION: The Tamil population is one of the largest migrant groups living in Switzerland and presents a high prevalence of gestational diabetes. The changes in dietary patterns due to migration are often underestimated in dietetics counseling. The project NutriGeD from Bern University of Applied Sciences aimed at developing the first official tool, the "Migmapp©", in Switzerland to help healthcare professionals counsel in the most efficient manner their gestational diabetes patients of Tamil origin.

OBJECTIVES: The aim of the present study was to assess the perceptions regarding the clarity and usefulness of the MigMapp©'s tools among Tamil migrant women living in Switzerland.

METHODOLOGY: A SurveyMonkey-based questionnaire was developed in German and translated into Tamil. Hardcopies of the survey were distributed to 100 Tamil women living in Switzerland. The completed surveys were manually collected and inserted into SurveyMonkey by NutriGeD team members and analyzed using SPSS and Excel.

RESULTS: 76% of the 25 participants had been living in Switzerland for more than 5 years, and 32% had already been diagnosed with gestational diabetes. The majority of respondents (83%, n=20) considered the Migmapp© to be complete in terms of providing the necessary information on the topic of dietetics and exercise tips for gestational diabetes. Both tools rated as the most understandable included a series of depicted visuals with respectively descriptive or instructional text. Helpfulness of using visuals was also shown by the high rating of the diabetic-friendly recipes, each including a photographed standard portion of the menu.

CONCLUSIONS: Overall, the Migmapp© was well accepted among the Tamil women participating in this evaluation survey and considered to be a good provider of lifestyle tips in case of gestational diabetes. The Migmapp© will be further tested for its efficacy and if proven successful, the developed materials will be made available, and developed for other migrant groups.

KEYWORDS

Dietetics counseling, Gestational diabetes, Migration, Tamil, Tool

RESUMO

INTRODUÇÃO: A população Tâmil representa um dos maiores grupos migrantes residentes na Suíça, apresentando alta prevalência de diabetes gestacional. As mudanças do padrão alimentar, que ocorrem devido à migração, são muitas vezes subestimadas nas consultas de nutrição. O projeto NutriGeD, da Universidade de Ciências Aplicadas de Bern, na Suíça, teve como objetivo desenvolver a primeira ferramenta elaborada na Suíça que tenha em atenção as mudanças de padrão alimentar desta população, o "Migmapp©", no sentido de fornecer aos profissionais de saúde uma forma eficiente de lidar com doentes tâmiles que apresentem diabetes gestacional.

OBJETIVOS: O presente estudo teve como objetivo avaliar as perceções relativamente à clareza e utilidade das ferramentas do Migmapp© entre mulheres migrantes Tâmil residentes na Suíça.

METODOLOGIA: Desenvolvimento de um questionário em alemão, baseado no SurveyMonkey, e posteriormente traduzido para Tâmil. Foram distribuídas cópias impressas do questionário a 100 mulheres tâmiles residentes na Suíça. Os questionários completados foram manualmente recolhidos e inseridos no SurveyMonkey por membros da equipa NutriGeD, e analisados com SPSS e Excel.

RESULTADOS: 76% dos participantes vivem na Suíça há mais de 5 anos e 32% tinham sido já diagnosticados com diabetes gestacional. A maioria das respondentes (83%, n=20) consideraram o Migmapp© completo, em termos de fornecimento de informação necessária no que diz respeito a dicas para controlar a diabetes gestacional, tanto nutricionais como de exercício físico. As ferramentas classificadas como as mais compreensíveis incluíam uma série de imagens descritivas, com o respetivo texto descritivo ou instrutivo. O poder de ajuda de imagens foi também demonstrado pela elevada classificação das dietas orientadas para pessoas diabéticas, uma vez que cada uma incluía uma fotografia de uma porção referência do menu.

CONCLUSÕES: Em geral, o Migmapp© foi bem aceite entre as mulheres tâmiles que participaram na sua avaliação através deste questionário, tendo sido considerado um bom fornecedor de informações sobre o estilo de vida a adotar em caso de diabetes gestacional. O Migmapp© será também testado no que diz respeito à eficácia e, sendo bem-sucedido, os materiais serão também disponibilizados e desenvolvidos para outros grupos migrantes.

PALAVRAS-CHAVE

Consultas de nutrição, Diabetes gestacional, Migração, Tâmil, Ferramenta

INTRODUÇÃO

By the end of 2014, the foreign resident population in Switzerland was about two million people and Sri Lanka was among the main countries applying for asylum (1), which is not surprising considering that the Sri Lankan diaspora represents one of the largest migrant groups in Switzerland (2). Since 1980, the Tamil population has been migrating from Tamil Nadu as well as Eastern Sri Lanka (2). Today, approximately 50.000 Tamils live in Switzerland (3) and one of the main reasons why this group started migrating to Switzerland in such large numbers more than 20 years ago was to flee the civil war in Sri Lanka (2). Forecasts predict that Tamil migrants will continue to find refuge in Switzerland in the next years (2). It is therefore important to gain knowledge about this population living in Switzerland, and ensure to provide a culturally competent healthcare service.

Studies have shown that migration can have a significant influence on health outcomes and that barriers such as insufficient language knowledge can significantly affect the communication between patient and healthcare professional, therefore impairing healthcare of migrants (4). In addition, knowledge of significant health issues which Tamil migrants encounter helped narrow down the project. Data indicate that the Tamil population in Switzerland presents a high prevalence of gestational diabetes and type 2 diabetes, most likely due to a combination of genetics and a new lifestyle (2). Data indicate that approximately 18% of this at-risk population is diagnosed with gestational diabetes (5) while the general prevalence worldwide is between 5 and 10% (6).

To date, there is no official available tool that considers the eating and physical activity habits of the migrant Tamil population living in Switzerland. This gap may jeopardize a successful communication with migrant patients, ultimately decreasing the quality of the provided healthcare and limiting the adequacy of therapy. In order to close this gap and enhance the cooperation between healthcare professionals and patients within the scope of consultations, the NutriGeD team (Nutritional Gestational Diabetes) developed a series of material as part of a folder called "Migmapp©", including tools to ease the consultation process, increase transcultural competence, sensitize nutritionists, dietitians, diabetes consultants as well as other employees in the healthcare system to the special needs of migrant populations, in this case, the Tamil.

The NutriGeD project was led by Bern University of Applied Sciences in Switzerland and carried out together with different partners and stakeholders from education and clinical fields, as well as the Swiss Diabetes Organization and the Tamil Association of Northwestern Switzerland. It included collaboration of nutrition scientists, dietitians, nurses and midwives.

The development of the Migmapp© prototype was achieved by the end of November 2015. Topics covered in the MigMapp© included the pathophysiology of gestational diabetes, transcultural competence, specifically in regards to the Tamil population, Sri Lanka's socio-political aspects, eating and physical activity habits and preferences (both traditional and new) of the Tamil population, as well as a set of bilingual info materials (German and Tamil) to be used in consultations and which covered diet and exercise topics specifically in the case of a gestational diabetes. The Migmapp© comprises a handbook and a stand-up display. The handbook is directed to healthcare professionals in order to foster their transcultural competence specifically in regards to the Tamil population, while offering a quick overview of gestational diabetes and standard dietetics management procedures. The stand-up display consists of seven tools, developed in German and Tamil, including:

Tool 1: "What does gestational diabetes mean?" - Description of the disease including risk factors, development of hyperglycemia, consequences for mother and child and management/ treatment options;

Tool 2: "Tamil version of the food pyramid for pregnant women with gestational diabetes": Combination of the Tamil food pyramid, received from the Tamil Association of Northwestern Switzerland, with the Swiss Society of Nutrition SGE's nutritional recommendations for pregnant women;

Tool 3: "Healthy eating plate using Tamil food": Creation of a healthy eating plate based on the nutritional recommendations of the Swiss Society of Nutrition SGE and traditional Tamil food;

Tool 4: "Eating healthy with gestational diabetes: dietitian approved recipes": Traditional recipes combining Tamil foods while considering the dietary intake requirements in case of gestational diabetes;

Tool 5: "Which vegetables grow in Switzerland?": Collection of common vegetables available in Switzerland followed by a short explanation on how to prepare them. This tool was created based on results from a previous focus group within the NutriGeD study, where Tamil participants mentioned that they did not always know about vegetables found in Swiss supermarkets nor how to prepare them;

Tool 6: "I decide actively!" - Photographs of a volunteer Tamil student from Bern University of Applied Sciences showing a series of pictures with activities of everyday life that are health promoting or not, e.g. take the stairs instead of using the elevator;

Tool 7: "How much sugar is in my food?" - A chart displaying popular food items, such as chocolate, fruit yoghurt and fruits, and the equivalent of sugar amount represented by sugar cubes, as well as a picture explaining where to read the sugar content when looking at a product's label.

Both handbook and stand-up display were developed considering user-friendly formats. They were both meant to provide essential information in a quick, intuitive and easy-to-read manner.

The chapters' contents in the handbook were established by the NutriGeD research team, and their pertinence was confirmed by surveyed healthcare professionals from the fields of medicine, nursing, dietetics and diabetes counseling who dealt with the presented topics in their daily practice.

The handbook first focuses on gestational diabetes and merges on topics covering transcultural competence in general, and transcultural competence when counseling Tamil migrants in particular. This way, healthcare professionals are provided with a clear overview of the condition they have to deal with as well as how they can optimally use transcultural competence in order to achieve an optimal counseling.

The handbook's A5 format and relative compact size is meant to encourage its easy usage on a daily basis in practice, in other words "on the go", as little time is left for reading time-consuming literature.

The seven tools included in the stand-up display folder aimed at easing the communication between the healthcare professional and the Tamil patient. Specifically, easy to understand illustrations about the notion of gestational diabetes and patients' tips to prevent it or handle it on a daily basis were provided, in their own language, but also in the healthcare professional's language, in this case in German, so both could look at the illustrations and fully understand the messages included on each page. For the stand-up display again, the number of tools was limited to essential information covering gestational diabetes, how it develops and what are the consequences, as well as healthy eating and exercise tips, focused on typical Tamil food products while including Swiss products that the patients may want to consider to incorporate in their diet. The stand-up display ends with a series of diabetic friendly menus, which the Tamil women can try at home, including their ingredients and cooking instructions.

OBJECTIVES

The aim of the present study was to assess the perceptions regarding the clarity and usefulness of the MigMapp©'s tools among Tamil migrant women living in Switzerland, to provide a culturally competent healthcare service.

METHODOLOGY

The questionnaire was developed online specifically for this study using SurveyMonkey Inc. (2016), Palo Alto, California, USA (www.surveymonkey.com). Once developed in German, questions were translated in Tamil by the Tamil Association of Northwestern Switzerland, who also functioned as an intermediary to manually distribute the printed version of the questionnaires to Tamil women, during a major event where were present about 100 women in the Temple. The NutriGeD team agreed on the recruitment of the potential participants and distribution of the questionnaires during that day. Therefore, subsequently to the Temple's event, additional willing participants were recruited during visit hours in the Association and additional questionnaires were handed out there as well. The survey was distributed to female participants only, from mid-November 2015 to mid-January 2016. The questionnaire was first developed online in German by the NutriGeD team, then translated in Tamil by the Tamil Association of Northwestern Switzerland and 100 copies were sent to this Association in print format so participants would not have to have access to internet to fill it out. It was kept as short as possible and closed questions were favored over open ones, in order to facilitate selection of responses. Besides, as the questionnaire was distributed in its Tamil version, the translation of responses to open questions in Tamil would have been a time-consuming and difficult process. It therefore included 22 questions, of which 20 were closed and two open. It comprised sociodemographic information (8 questions), familiarity and experience with gestational diabetes (2 questions), and 12 questions pertaining to personal opinion on the understandability and helpfulness of the seven tools contained in the stand-up display and possible issues not covered by them using the 5-point Likert scale (1-Not at all, 2- Barely, 3- Moderately, 4- Very much, 5- Extremely). Participation was voluntary and anonymous. Consent was considered given if the respondent completed and returned the questionnaire.

The answered questionnaires were analyzed using SurveyMonkey (2016) and IBM® SPSS® Statistics 23.0 (2015) as well as Microsoft Office Excel (2010).

RESULTS

Socio-demographic information

In total 100 questionnaires were distributed to the Tamil Association of Northwest Switzerland. Of the returned 28 questionnaires, 25 were analyzed, as two questionnaires were returned blank and one was partially completed (response rate 25%). Of the 25 participating women, 13 were older than 35 years of age and 10 were aged between 20 and 34 years. 95% of the respondents were originally from Sri Lanka and only one person came from India. 23 respondents were married, while one was single and another one divorced. The majority of the women (80%) indicated to be working whereas three were unemployed, one was retired and one was a homemaker. More than half of the respondents (60%) did not have Swiss nationality yet while the majority had been living in Switzerland for more than 5 years (Table 1). A high percentage of the respondents (76%) considered their German language skills to be "good" to "very good" while only 20% indicated to have basic language knowledge (Table 1).

Table 1

Characteristics of respondents

AGE (YEARS)	n	%
18-20	2	8
20-34	10	40
35 or more	13	52
TOTAL	25	100
CIVIL STATUS	**n**	**%**
Married	23	92
Single	1	4
Divorced	1	4
Widowed	0	0
TOTAL	25	100
COUNTRY OF ORIGIN	**n**	**%**
Sri Lanka	19	95
India	1	5
TOTAL	20	100
SWISS NATIONALITY	**n**	**%**
Yes	8	40
No	12	60
TOTAL	20	100
YEARS IN SWITZERLAND	**n**	**%**
Less than 1 year	1	4
1 to 5 years	5	20
More than 5 years	19	76
More than10 years	0	0
TOTAL	25	100
GERMAN LANGUAGE (SKILLS/KNOWLEDGE)	**n**	**%**
Basic	5	20
Good	9	36
Very good	10	40
Proficiency	0	0
Native/ bilingual	1	4
TOTAL	25	100
EMPLOYMENT STATUS	**n**	**%**
Working	20	80
Unemployed	3	12
Retired	1	4
Homemaker	1	4
TOTAL	25	100

Familiarity and experience with gestational diabetes

32% of the respondents had been diagnosed with gestational diabetes at least once and 24% knew other Tamil women who had been diagnosed with this condition. As far as preferred type of communication means when it comes to receiving health information and tips, direct communication through healthcare providers was the most selected option with 78% of respondents, while 61% and 57% favored internet and brochures, respectively. In this context, smartphone applications only interested 17% of respondents (Data not shown).

Opinion on the understandability and helpfulness of the tools

In regards to the evaluation of the Migmapp©, each tool was rated based on the following four questions: "How easy is it to understand this tool?", "How helpful are the images in this tool in order to understand the information?", "How useful is this tool for implementing changes in everyday life in order to control gestational diabetes?" and "How much does this tool remedy to your information needs concerning this topic?" Answer options consisted of a 5-point Likert scale ("1- Not at all, 2- Barely, 3- Moderately, 4- Very much, 5- Extremely"). For each tool, a weighted average was calculated per evaluation question and ratings of the seven tools were compared (Figure 1).

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The two most understandable tools appeared to be tool 1 ("What does gestational diabetes mean?") (weighted average 3.68) and tool 5 ("Which vegetable grow in Switzerland?") (weighted average 3.64), and the least understandable were tool 2 ("Tamil version of the food pyramid for pregnant women with gestational diabetes") (weighted average 3.36) and tool 7 ("How much sugar is in my food?") (weighted average 3.32) (Figure 1).

In terms of helpfulness of the images, tool 1 and tool 4 ("Eating healthy with gestational diabetes: Dietitian approved recipes") convinced most of the participants (with both weighted averages of 3.8) (Figures 1).

As far as usefulness to implement changes in everyday life in order to control gestational diabetes, again, both tools 1 and 4 were rated the highest (weighted averages of 3.8, and 3.68, respectively) (Figure 1). Interestingly, the lowest rated tool in terms of usefulness was tool 5, with a weighted average of 3.28, despite it being rated as one of the most understandable of the seven tools.

All tools were highly rated in terms of their instruction potential, tools 4 and 5 being the highest rated (both with a weighted average of 3.76) (Figure 1). Most respondents (70%, n=23) rated tool 7 "How much sugar is in my food" as the generally most helpful tool, followed by tool 3 ("Healthy eating plate using Tamil food") with 65%, and tools 2 ("Tamil version of the food pyramid for pregnant women with gestational diabetes") and 4 ("Eating healthy with gestational diabetes: Dietitian approved recipes") with both 57%. The tool voted as the generally least helpful was tool 6 "I decide actively", with only 17% (Figure 2). Finally, the majority of respondents (83%, n=20) considered the Migmapp© to be complete in terms of providing the necessary information on the topic of dietetics and exercise tips for gestational diabetes.

DISCUSSION

Sensitization of healthcare professionals to transcultural competence can improve communication with migrant patients, therefore optimizing healthcare and therapy outcomes. From the obtained results, it is clear that the developed counseling tool "Migmapp©" was well accepted among the Tamil women participating in this evaluation survey and considered to be a good provider of eating and exercise tips in case of gestational diabetes. Both tools rated as the most understandable included a series of depicted visuals with respectively descriptive or instructional text ("What does gestational diabetes mean?", "Which vegetable grow in Switzerland?").

Helpfulness of using visuals was also shown by the high rating of the diabetic-friendly recipes, each including a photographed standard portion of the menu, cooked on a workshop by voluntary Tamil women from the Tamil Association of Northwestern Switzerland and members of the NutriGeD team. The usefulness of the tools for implementing changes in everyday life in order to control gestational diabetes correlated with the high rating of tools with visuals and corresponding text. However, the tool introducing to typical vegetables found in Switzerland and preparation tips, once suggested in a focus group with Tamil women in the scope of NutriGeD, was an exception, as it was the least well-rated in terms of usefulness for implementation in daily life, despite it being rated as one of the most understandable tool. To our surprise, this tool, together with the recipes, was rated as remedying the most to the participants' information needs when it comes to eating healthy with gestational diabetes. Possible barriers to using this tool need to be further investigated, and may involve costs and access to the products. The results hint at a clear necessity to further promote the use of the food pyramid and as well as reading food labels in this case specifically for sugar content, as both food pyramid and sugar content in foods tools

Figure 1

Appreciation of each tool (weighted average) regarding the four questions (on a 5-point Likert scale ("1- Not at all, 2- Barely, 3- Moderately, 4- Very much, 5- Extremely"): 1 (understandability): "How easy is it to understand this tool?", 2 (helpfulness of images): "How helpful are the images in this tool in order to understand the information?", 3 (usefulness): "How useful is this tool for implementing changes in everyday life in order to control gestational diabetes?", 4 (instruction potential): "How much does this tool remedy to your information needs concerning this topic?"

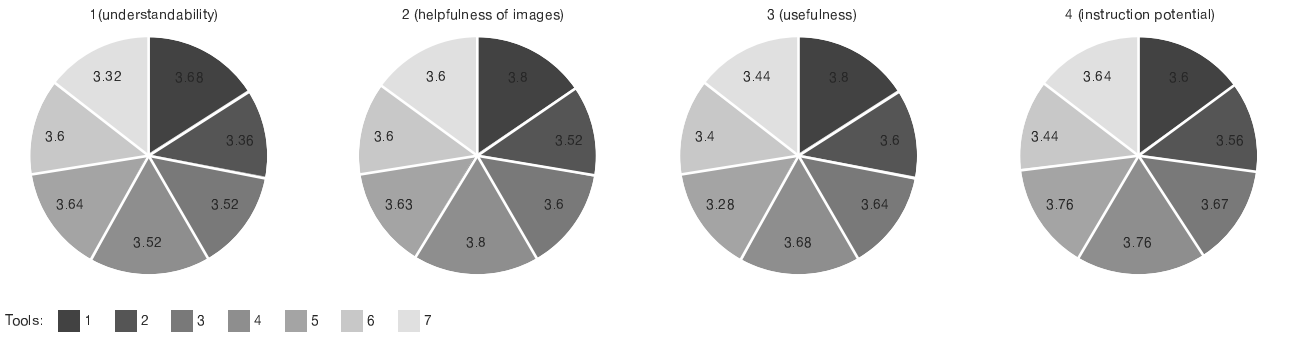
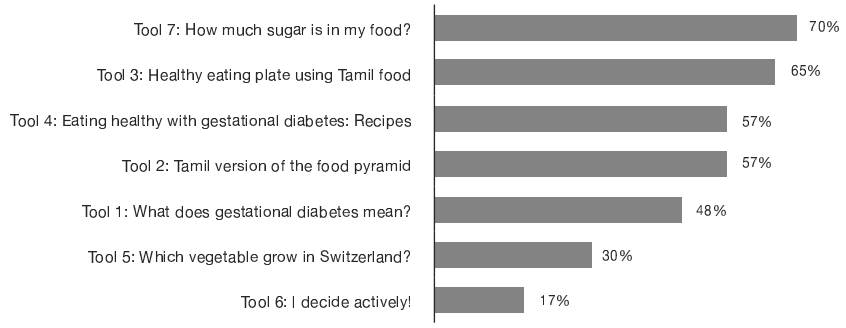


Figure 2

Evaluation of general helpfulness of the tools, with possible multiple answers (n=23)



were the least well-understood. They figured yet among the four tools rated as most helpful, next to the healthy eating plate and the recipes. Efforts should be made to increase understanding of healthy eating guidelines and applying concepts to personal eating and exercising routine, while providing a cultural competent message.

In terms of communication means, the majority of respondents favored having direct contact with a healthcare professional, highlighting the importance of ensuring optimal communication during the counseling hour. Finally, the tool "I decide actively", which was developed to engage women to be physically active throughout the day, was considered the least helpful and needs to be optimized. The pictures on that tool included visual tips such as "take the stairs not the elevator".

A potential limitation for this tool is the lack of corresponding text describing the pictures. Other study limitations include a limited sample size and a rather low response rate (25%), both of which are critical to the robustness of results, and a restricted amount of questions per tool. A larger-scale survey among a representative sample of the Tamil women population in Switzerland, or focus groups with Tamil migrant women including an in-depth analysis of each tool should provide further detailed appreciation of their views concerning the Migmapp©. A questionnaire format was preferred over a focus group to increase chances of higher participation rates. In addition, it was translated in Tamil, so language would not be a barrier to participate in the study and therefore more women would be willing to fill out the questionnaire.

One additional limitation of the study is that the experience with pregnancy among participants was not considered. The tools were indeed specifically designed for Tamil migrants with gestational diabetes, yet it was difficult to recruit corresponding participants and therefore the participants' criteria were extended to Tamil migrant women in general. It would have been interesting to compare the responses from a woman who was pregnant at the time of the study with one who never had children or that had been pregnant in the past, as this could probably influence the evaluation, appreciation as well as interest for the tools. Further work should specifically analyze the perspective of the pregnant women regarding the Migmapp©.

CONCLUSIONS

The Migmapp© was well accepted among the Tamil women participating in this evaluation survey and considered to be a good provider of lifestyle tips in case of gestational diabetes. The Migmapp© offers a novel approach for an optimized transcultural dietetics counseling and might be part of a promising strategy to be used in clinical practice. The Migmapp© is scheduled to be tested by healthcare professionals to assess its efficacy and if proven successful, the developed materials will be made available for clinical visits, in hospital or private practice and further folders will be developed for other migrant groups following a similar approach.

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